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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,572	02/14/2002	Balu Jeganathan	EU2063866469IS	7495

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EXAMINER

COLON, GERMAN

ART UNIT PAPER NUMBER

2879

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,572

Applicant(s)

JEGANATHAN ET AL. *ju*

Examiner

German Colón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 4, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 4. 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 1, on page 4, line 15. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. The Examiner notes that it is not clear whether line 15 of page 4 intended to recite "The lamp 1" or if it was a typographical error.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claims 4, 9 and 10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, claims 4, 9 and 10 have not been further treated on the merits.

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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, and 5 rejected under 35 U.S.C. 102(b) as being anticipated by Kano et al. (US 3,875,456).

Regarding claim 1, Kano discloses a lamp including a plurality of semi-conductor light emitting junctions **A, B** (or **A''**, **B''**) with a common layer of fluorescent material **2** (see Col. 3, lines 46-49) arranged thereover, wherein the junctions are provided in a three-dimensional array (see Figs. 2-5).

Regarding claim 2, Kano discloses a lamp including a plurality of semi-conductor light emitting junctions **A, B** (or **A''**, **B''**) with a common layer of fluorescent material **2** (see Col. 3, lines 46-49) arranged thereover, wherein the junctions are mounted on a curved support structure **1** so as to be arranged substantially on an imaginary spheroid surface (see Figs. 2-5). The Examiner notes that the junctions are arranged on a lower and inner side of an imaginary surface which radius is above the junctions.

Referring to claim 5, Kano discloses a lamp including a plurality of light emitting junctions **A, B** (or **A''**, **B''**) mounted on at least one curved conductor **1** so as to adopt a 3D array, wherein the lamp includes a common layer of fluorescent material **2** (see Col. 3, lines 46-49) over at least adjacent junctions.

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6. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (US 5,218,233).

Takahashi discloses a lamp including a plurality of light emitting junctions **102** (or **503**) mounted on at least one curved conductor (see Figs. 1-3 and 5 and 6), wherein the at least one conductor includes a recess for receipt of a respective one of the junctions (see Figs. 2 and 6).

7. Claims 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Michael (US 5,999,151).

Referring to claim 6, Michael discloses a lamp including a plurality of light emitting junctions (see Figs. 1-3) mounted on at least one curved conductor **27** (or **14, 16**), wherein the at least one conductor includes a recess for receipt of a respective one of the junctions (see Fig. 2).

Referring to claim 7, Michael discloses the at least one curved conductor being configured such that junctions are arranged substantially on an imaginary spheroid surface. The Examiner notes that the junctions are arranged on a lower and inner side of an imaginary surface which radius is above the junctions.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US 5,218,233) in view of Comanzo (US 6,409,938).

Regarding claim 1, Takahashi discloses a lamp including a globe **104**, a plurality of semiconductor light emitting junctions **102** (or **503**) wherein the junctions are provided in a three-dimensional array. Takahashi fails to disclose a common layer of fluorescent material arranged over the junctions.

However, in the same field of endeavor, Comanzo discloses an LED wherein the globe comprises a fluorescent material with the purpose of improving the quantum efficiency and luminosity of the lamp, wherein the luminosity is greater than 435 lumens per watt, and the fluorescent material is simple to manufacture (see Col. 1, lines 28-30, 35-38 and 45-46). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the fluorescent material disclosed by Comanzo, to the lamp of Takahashi in order to improve the quantum efficiency and luminosity of the lamp, wherein the luminosity is greater than 435 lumens per watt, and the fluorescent material is simple to manufacture.

Referring to claim 3, Takahashi-Comanzo discloses the junctions embedded within a globe.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michael (US 5,999,151) in view of Nagasawa (US 4,255,688).

Michael discloses the claimed invention except for the limitation of “the recess has side walls which function as an optical guide for controlling the direction of light transmission and/or angle of divergence”. However, in the same field of endeavor, Nagasawa discloses an LED

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wherein a light emitting junction is mounted on a conductor, said conductor including a recess which side walls function as an optical guide in order to make possible to reflect substantially in one direction the light radially emitted from the junction, providing a light emitting display device of small size and exhibiting excellent visibility (see Col. 1, lines 10-13, and 55-57). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Nagasawa to the LED of Michael with the purpose of making possible to reflect substantially in one direction the light radially emitted from the junction, providing a light emitting display device of small size and exhibiting excellent visibility.

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Mesquida, in US 4,703,219, discloses an LED with optical means to concentrate the emitted light.

Hopper, in US 4,878,107, discloses an LED comprising a plurality of junctions and curved conductors.

Kamada et al., in US 6,331,063, discloses an LED wherein light emitting junctions are arranged on an imaginary spheroid surface.

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Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 703-305-5987. The examiner can normally be reached on Monday thru Friday, from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703-305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

gc

May 28, 2003


ASHOK PATEL
PRIMARY EXAMINER